ALGEBRAIC COMBINATORICS

Guest Editor: I.M. Gessel

CONTENTS

Introduction 1

N. Bergeron and A.M. Garsia
Zonal polynomials and domino tableaux 3

D.M. Bressoud
Unimodality of Gaussian polynomials 17

E.R. Canfield and D.M. Jackson
A D-finiteness result for products of permutations 25

H. Décoste, G. Labelle and P. Leroux
The functorial composition of species, a forgotten operation 31

J. Désarménien and D. Foata
The signed Eulerian numbers 49

M.L. Wachs
An involution for signed Eulerian numbers 59

P.H. Edelman, R. Simion and D. White
Partition statistics on permutations 63

I.P. Goulden
A linear operator for symmetric functions and tableaux in a strip with given trace 69

M.D. Haiman
Dual equivalence with applications, including a conjecture of Proctor 79

M.D. Haiman and D. Kim
A characterization of generalized staircases 115

P. Hanlon
A Markov chain on the symmetric group and Jack symmetric functions 123

G. Labelle
On asymmetric structures 141

A. Lascoux et M.-P. Schützenberger
Décompositions dans l'algèbre des différences divisées 165

K. Liang and M.L. Wachs
Mahonian statistics on labeled forests 181

S.C. Milne
Classical partition functions and the $U(n+1)$ Rogers–Selberg identity 199

A.M. Garsia
Orthogonality of Milne's polynomials and raising operators 247

J.B. Remmel
Formulas for the expansion of the Kronecker products $S_{(m,n)} \otimes S_{(1^{p-r},r)}$ and $S_{(1^k 2^l)} \otimes S_{(1^{p-r},r)}$ 265

B.E. Sagan
Inductive proofs of q-log concavity 289

J.R. Stembridge
Eulerian numbers, tableaux, and the Betti numbers of a toric variety 307

V. Strehl
Identities of Rothe–Abel–Schläfli–Hurwitz-type 321

Author index to volume 99 341